



LOUDOUN COUNTY PUBLIC SCHOOLS

PLANNING AND LEGISLATIVE SERVICES

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June 4, 2008

Marchant Schneider
Department of Planning
County of Loudoun County
1 Harrison Street, S. E., 3rd Floor
Leesburg, VA 20177-7000



RE: SPEX 2008-0017 & CMPT 2008-0007
Loudoun County School Board – Lenah Property
Response to Referral Comments

Dear Marchant:

On behalf of Loudoun County Public Schools, I am writing to submit responses to the referral comments provided on the proposed MS-5 and HS-7 School Site at the Lenah property. Enclosed please find 12 sets of this letter, the referral responses, the updated Statement of Justification and the revised SPEX/CMPT Plat.

Changes have been made to address the referral comments as well as to reflect more detailed engineering conducted on the property. The revised plat, along with the responses, details the changes which include the following:

- The size of the middle school has been changed to allow up to 180,000 square feet based on further development of the two story architectural plans
- The site acreage has been amended to 99.32 acres to reflect right-of-way dedication
- An equipment storage building has been added at the middle school and the concessions, ticket booth, and storage buildings have been labeled for the high school
- The potential tree save along the future Lenah Connector Road has been delineated and adjusted to represent the anticipated disturbance line associated with the construction of the Lenah Connector Road
- The proposed buffer along existing Lenah Road across from the Lenah Run community has been enhanced to incorporate a berm with landscape materials to be planted on top. LCPS continues to work with the Lenah Run community to review this proposal. In addition, LCPS is working with property owners on the western property boundary and will provide additional information on any changes for that property boundary at a later date

- A note has been added to the Plat (note 24) to identify the proposed irrigation well for the competition fields. LCPS has engaged a hydrogeologist to develop a monitoring program for area wells and to determine the most suitable location for the proposed irrigation well.

As you know, a meeting has been scheduled with the Office of Transportation and VDOT to review the transportation comments and recommendations. A separate response will follow for the transportation comments. LCPS has also scheduled a meeting with County staff to review the additional testing recommended for the archaeological investigation and has contracted with an archaeologist to conduct the additional review. A supplemental report will be provided when available.

Also enclosed is a timeline extension for the Special Exception action. If you have any questions or need additional information, please let me know.

Sincerely,

A handwritten signature in black ink, appearing to read "Sara", with a large, stylized loop at the beginning.

Sara Howard-O'Brien, AICP
Land Management Supervisor

**Loudoun County Public Schools: Lenah Run
SPEX 2008-0017**

**Response to Referral Comments
June 3, 2008**



**Environmental Review Team
Comments dated May 5, 2008**

Comment: 1. Staff appreciates the inclusion of sustainable design elements in the commission permit statement of justification. With the second submittal, please include a LEED for School score sheet to indicate desired design outcomes for site sustainability, water efficiency, energy and atmosphere, indoor air quality, efficient materials and resources use, and innovative design. Providing the analysis will help assess where public facility design ranks vis-à-vis the LEED “silver” goal that is recommended in the December 2007 Metropolitan Washington Council of Governments green building report that was endorsed by the Board of Supervisors on April 15, 2008.

Response: The design of the LCPS middle school facility as well as the elementary and high school has experienced growth in terms of the level of sustainability in design and construction practices since the year 2000. Each prototype has progressed with a goal of sustainability from a holistic approach which includes design, construction and operations of our facilities. The current version of the facility is being designed with a goal to be successful stewards of the environment which can be measured by a number of metrics. LCPS has engaged a team of architects, engineers and environmental consultants to evaluate the design in accordance with LEED, Green Globes, CHPS and the EPA Energy Star program. Preliminary results of study indicate that the LCPS facilities will fall well within the required score relative to the LEED Rating System. A summary graph of results is attached and final assessment report will be available upon completion in mid June.

Comment: 2. ERT specifically recommends a commitment to measurement and verification of green design elements with this project, similar to permanent measurement and verification systems to track water and energy usage at T.C. Williams High School in Alexandria, Virginia. Energy and water use data are collected and made available to students at a central “dash board” in the Ferdinand T. Day Student Commons. (<http://www.acps.k12.va.us/news2008/nr2007073102.php>) Such a commitment can enable students to test design effectiveness and spark career interest in sustainable design.

Response: LCPS's Energy Education team administers a well developed system of monitoring, measurement and verification of all utility costs including water, electricity, gas, fuel oil, etc. To date LCPS has saved over \$25 million in energy cost avoidance and over 1 billion pounds of carbon output. The Energy Education team includes seasoned educators and a Certified Energy Manager. Their program includes educational presentations to staff and students, Energy conservation awareness student contest and the Energy Cost Avoidance Program (CAP). This program includes "Energy Report Cards" that are provided to each school that describes the energy and water use as well as that particular school's level of cost avoidance. A sample Report Card is attached.

Comment: 3. For clarity, update the wetland note number 18 to include the case number: 2006-8379, dated September 10, 2007.

Response: Note 18 has been updated as recommended.

Comment: 4. The existing pond on the northwest corner of the site is delineated as a water of the US. If federal and state permits approve enlarging the existing pond for stormwater purposes, please demonstrate that the pond's water quality volume is designed above and beyond the existing pond volume. Facilities Standards Manual (FSM) Section 5.320 requires best management practice (BMP) analysis to compare pre-development pollution loads with post-development loads. The existing pond volume already removes pollutants, and post-development load analysis should augment the existing pollution treatment to meet post-development BMP requirements.

Response: Preliminary engineering analysis and design recognizes the existing pond. As is noted in the application, this site includes a middle school and a high school. The pond is not a factor in storm water consideration for the development of the middle school portion of the site. The pond is currently being evaluated for the structural integrity of the dam as well as how recent OTS comments relative to road improvements will affect the geometry of the facility. It is the intent to address the pond in the site plan process for the high school including exploration of low impact design measures to enhance water quality.

Comment: 5. ERT concurs with the Loudoun Water recommendation of turf management practices that will minimize fertilizer, pesticide, and herbicide runoff from lawns and athletic fields. Further, ERT concurs on the recommendation of bioretention basins to treat impervious storm runoff and runoff containing fertilizer.

Response: As a part of the development program numerous measures will be incorporated for wellhead/watershed protection including stormwater management, best management practices, and low impact design. In addition, a turf management best practices program for fertilization, pesticide and herbicide applications will be employed. The applicant will work closely with Loudoun Water, the Health Department and County staff in the development and implementation of these measures. Loudoun County Public Schools is presently contracting with a hydrogeologist to assist with development and monitoring strategies.

Comment : 6. ERT recommends minimizing proposed parking spaces on site to minimize stormwater runoff and pollution. Those spaces deemed necessary should include some combination of stormwater treatment, depending on proposed use:

- **Consider concrete grid pavers or other permeable surfaces with some gravel detention underneath to detain stormwater volumes. Providing another low impact development option that may support Loudoun Water's concerns about impervious surfaces in the Lenah wellhead zone.**
- **For any proposed bus parking area, ERT strongly recommends installation of oil-water separators to treat all runoff, above and beyond other BMP measures required. These areas are consistent with "fleet storage areas," a hotspot use identified in FSM Section 5.320.E.1d. Permeable parking surfaces are not recommended in conjunction with oil-water separators.**

Response: While we recognize the multiple benefits of minimizing parking spaces on the site from environmental, construction cost, maintenance cost, and space requirements standpoints, the parking proposed reflects what LCPS views to be the minimum parking needed for co-located schools. We anticipate that infiltration based technologies including porous pavement will not be feasible for most parking areas due to the existing soils on site.

With consideration of the fact that the existing soils on-site do not generally support the use of grid pavers or other permeable surfaces, LCPS has altered the standard curb and gutter detail to provide flush header curb promoting sheet flow in concert with other low impact design techniques like vegetative filter strips, disconnected impervious areas, allowing the use of grass swales to channel runoff. Natural drainage divides have been honored and a SWM/BMP plan will ensure pre-treatment of runoff before discharge to areas within the Lenah wellhead zone.

In an effort to implement low impact design, we anticipate that the bus storage area will be constructed without curb and gutter, permitting sheet flow to a vegetative filter strip. This runoff will likely receive secondary treatment by a BMP facility proposed with the Lenah Village Drive plans. We believe this design is consistent with the use of the area, which is principally for temporary bus parking. The buses that transport students to and from the school facilities will be parked in this location during the school hours and when not in use. This is not a repair or maintenance facility, simply a location to park the buses when they are not transporting students. The buses will be in good repair for operation. With this in mind, we believe it would not warrant use of an oil water separator and that avoiding concentrated runoff from the site is preferable. As to the pavement section, we proposed to use traditional asphalt pavement.

Comment: 7. Staff emphasizes the importance of mitigating wetland and stream impacts close to the impact area to help maintain water quality and flood protection functions, as well as habitat. Therefore, where such impacts are deemed unavoidable, staff recommends a commitment be provided to prioritize the mitigation as follows: 1) within the Board Run Watershed within the same Loudoun County geographic Policy area, 2) within the Broad Run Watershed within another Loudoun County geographic Policy Area, or 3) elsewhere within the Loudoun County, subject to approval by the U.S. Army Corps of Engineers and the Virginia Department of Environmental Quality. This approach is consistent with Policy 23 on Page 5-11 of the Revised General Plan (RGP), which states that "the County will support the federal goal of no net loss to wetlands in the County." Furthermore, the County's strategy is to protect its existing green infrastructure elements and to recapture elements where possible [RGP, Page 6-8, Green Infrastructure Text].

Response: LCPS agrees to the recommendation of staff to mitigate impacts in the priority order suggested above.

Comment: 8. Adjust the "Potential Tree Area" label in the legend to "Potential Tree Save Area."

Response: The recommended change has been incorporated into the SPEX plat.

Comment: 9. The best stand of mature hardwood forest on the project site is along the northeastern project boundary, along the proposed Lenah Connector. Most of the forest buffer between the road dedication and the perennial stream is not included for conservation. Forest, Tree and Vegetation policy 5 of the RGP encourages preservation of trees along roadways to "provide shading, reduce peak storm flows, and contribute to

the enhancement of Green Infrastructure.” (p.5-32) ERT recommends widening the tree conservation area parallel to the existing stream to at least 100 feet to effectively maintain green infrastructure.

Response: Limits of disturbance in this area is based upon road grades for the Lenah Connector road and existing grades in the area. LCPS has maximized the tree save area in this location. LCPS notes that there is not a “stream” in this area. Nonetheless, we have provided, on average, a width of 100 feet. There are some locations that are slightly less and some that are significantly wider.

Comment: 10. Consider conserving tree resources on site by transplanting existing trees. This site includes significant stands of cedar trees. If relocated to the southern project boundary, they could provide an effective visual buffer for properties to the south. A successful transplant of loblolly pine trees on the Creighton Farms residential site along Route 15 helps to provide an effective visual buffer for the Oak Hill plantation historic site.

Response: LCPS is currently working with neighboring property owners to assess and consider their concerns for buffers on the property beyond those required. As we reach agreement for enhanced landscaping measures we will submit those to the County as a part of our proposal. LCPS is committed to provide an effective buffer and screening plan with the site plans. We have had an arborist review the existing site and make recommendations for potential tree save area enhancements and review existing materials for potential transplanting. In most cases, evergreen trees provide the most effective form of vegetative screening; however, it is the LCPS arborist’s conclusion that there are not evergreen trees on the site suitable for transplanting. The on-site trees are in forest stands and, as such, have minimal lower branches making them ineffective for the desired purpose.

Comment: 11. This site also possesses several fence rows. Please consider preservation of these fence rows outside of proposed field and building sites. One of the best examples of fence row preservation in Loudoun County is on the School Board building site.

Response: LCPS specifically addressed this opportunity during the schematic design and layout phase of the site. Geometric and grading constraints of the program requirements as they relate to the site configuration posed many challenges with incorporation of the facilities and did not allow for conservation of a significant enough portion of the hedgerow to maintain the character of a fence row preserved.

Comment: 12. The County is in the early stages of implementing a program to establish a network of groundwater monitoring wells throughout Loudoun County. These wells will be dedicated to the long-term monitoring of groundwater levels and groundwater quality. Ultimately, the data collected from these wells can be used to better manage and protect this important resource upon which many citizens depend. Please consider dedicating well number WWIN-1970-0125 to the program, as there is not building proposed near it. A well accepted into the monitoring program does not need to be abandoned. Further information is available from Glen Rubis or Dennis Cumbie at (703) 777-0397.

Response: Although this well still appears in Loudoun County's GIS, it was previously abandoned and as such isn't suitable for monitoring use. There is one existing well remaining on the property which is currently being used for agricultural purposes. Loudoun County Public Schools will either abandon the well in accord with Health Department requirements or work with the County to allow the well to be utilized for the County's well monitoring program. LCPS also plans to install a well for irrigation purposes which may be suitable for the monitoring program. LCPS will work with the County staff to determine if the existing or proposed well would be suitable for the County's monitoring program.

Comment: 13. Why is an emergency access road proposed to bisect four proposed basketball courts adjacent to the middle school site?

Response: The emergency access road will be closed (physically barricaded) except in the event of an emergency or planned deliveries. And in these events, there will be no one on these courts. The "dual use" is an efficient use of space and slightly reduces impervious surfaces.

Parks, Recreation and Community Services
Comments dated May 6, 2008

Comment: 1. The Department of Parks, Recreation and Community Services has enjoyed a long-standing collaboration with Loudoun County Public Schools that allows the use of certain school facilities for PRCS programs. We appreciate that cooperative agreement and hope it continues since it is clearly consistent with the Revised General Plan policy that states school sites should be "*community assets and the focal point for active recreation and after-school programs*".

Response: Loudoun County Public Schools likewise desires to continue the cooperative agreement with Parks and Recreation.

Comment: 2. PRCS supports the School Policies under the Fiscal Planning and Public Facilities of the Revised General Plan in which, *"School - related open space and athletic fields will be planned, designed and coordinated with the County's parks and recreation programs and facilities through a referral process."*

Response: Loudoun County Public Schools will continue to coordinate with Parks and Recreation.

Comment: 3. PRCS strongly supports any efforts to protect and preserve wetlands, trees, and native vegetation because these contribute directly to protecting the health of surface water, groundwater, air quality, and aesthetics – all of which contribute to the health of the community's residents. We recommend that any substantial "tree save" area has a Forest Management Plan that addresses the use, maintenance, target vegetation, wildlife management goals and methods, and other aspects of sustaining a functional and attractive natural area. The management plan should address how multiple layers – overstory, understory, shrub and herbaceous layers – will be maintained to ensure the health and functionality of the vegetated open space.

Response: The site has been designed to protect and maintain environmentally sensitive areas of the site, specifically in the northeast portion of the property which includes limited areas of moderately steep slopes, wetlands and potential tree save areas. In accord with the County's Facilities Standards Manual a Tree Conservation Plan will be provided for on site tree save areas.

Division of Environmental Health
Comments dated April 29, 2008

This Department reviewed the package provided and recommends approval with the following comments/conditions to the proposal.

Comment: All the proposed lots and structures are properly served by public water and public sewer.

Response: Confirmed. Please note that LCPS plans to install an irrigation well for competition athletic fields.

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Comment: All existing wells and drainfields are properly abandoned (Health Department permit required) prior to submission of record plat or razing of the structure, which ever is first.

Response: The owner of the property has razed the existing structure and abandoned a previously existing hand dug well. There is one existing well remaining on the property which is currently being used for agricultural purposes. Loudoun County Public Schools will either abandon the well in accord with Health Department requirements or work with the County to allow the well to be utilized for the County's well monitoring program.

Loudoun Water
Comments dated April 15, 2008

Comment: 1. Offsite water and sewer improvements are required in order for public water and sewer to be extended to the property.

- a. The construction plans for these offsite improvements have not been approved by Loudoun Water.
- b. Required bonds have not been posted with Loudoun Water for these offsite improvements.
- c. Required easements have not been dedicated to Loudoun Water.

Response: The plans to extend public water and sewer to the property involve a series of plans some of which have been approved, some of which have been bonded and some of which are in design. The public sewer and water will be extended as a part of the development process and Loudoun County Public Schools recognizes the necessity for plans to be approved and bonded and for easements to be dedicated to Loudoun Water.

Comment: 2. Should offsite easements be required to extend public water and/or sanitary sewer to this site, the applicant shall be responsible for acquiring such easements and dedicating them to Loudoun Water at no cost to the County or to Loudoun Water.

Response: Acknowledged.

Comment: 3. The subject property is located across the road from the Lenah Run subdivision, where Loudoun Water operates a community water system, and the property is located within the wellhead protection area for the Lenah Run subdivision. As such, activities on the property have the potential to

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impact the quality of the source water for Lenah Run. Hence, Loudoun Water requests that all construction and operations activities on the property follow best management practices for groundwater protection. This includes BMPs for storm water control during construction and operations such as low impact development (LIP)-style bioretention basins, the use of “smart controllers” if irrigation systems are installed, and turf management best practices regarding fertilization and pesticide/herbicide applications. Other best management practices may also be appropriate.

Response: Loudoun County Public School staff met with Loudoun Water staff on May 7th to review the site development and to discuss the measures that will be put into place to protect the Lenah Run community water system, as well as other individual wells located adjacent to or near the planned school site. Loudoun County Public Schools is contracting with a hydrogeologist to prepare a well monitoring program for during and after construction. As a part of the development program numerous measures will be incorporated for wellhead/watershed protection including stormwater management, best management practices, and low impact design. It is noted that there will be minimal difference between pre and post drainage divides thereby maintaining recharge areas. In addition, a turf management best practices program for fertilization, pesticide and herbicide applications will be employed. The applicant will work closely with Loudoun Water, the Health Department and County staff in the development and implementation of these measures.

**Department of Building and Development – Archaeological Review
Comments dated April 19, 2008**

Comment: 1. The report submitted by URS for this application and the work it describes do not meet the standards as described in the Virginia Department of Historic Resources Guidelines (VDHR) as required by Loudoun County. Large portions of the property, considered high to moderate probability for yielding archaeological information, were not tested.

A Phase I survey is required for this application that meets VDHR standards.

Response: LCPS has contracted with an archaeological consultant and scheduled a meeting with staff to review the site for further archeological testing.

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**Department of Building and Development – Zoning
Comments dated May 13, 2008**

Comment: 1. Approval of the Special Exception is dependent upon the approval of SBPL-2008-0002, Lenah Subdivision. The lot containing the Middle and High School does not currently exist; the parcel will be created with the approval of SBPL-2008-0002 and subsequent Subdivision Record Plat applications. If the Subdivision applications are not approved, the parcel for the school site is not created. Zoning Staff cannot approve this Special Exception until the Preliminary Subdivision Application (SBPL-2008-0002) and subsequent Subdivision Record Plat applications are approved, and the internal property lines on the future school site are vacated.

Response: There are a series of applications that are under review for the proposed school use including the preliminary subdivision plan (SBPL 2008-0002). It is intended, however, to create the proposed lot via a boundary line adjustment of the existing parcels. The boundary line adjustment will be filed shortly. In prior similar situations, the County has conditioned applications to require the creation of the lot prior to issuance of the Zoning Permit (i.e., building permit). Loudoun County Public Schools requests that this application be treated in the same manner. This will ensure that the lot will be created for the intended use prior to implementation of the use and allow the decision regarding the proposed use to be made prior to the creation of a lot that is specifically designed for the use. Example condition language: *Lot consolidation and/or boundary line adjustment of the property to create the school parcel shall be required prior to or in conjunction with site plan approval and prior to the issuance of the first zoning permit.*

Comment: 2. Approval of the Special Exception is dependent upon the approval of SBPL-2008-0002, Lenah Subdivision. In the event the Lenah Subdivision is not approved, will Lenah Road be adequate to provide all road access to the middle and high school? Are the Loudoun County Public Schools prepared to process subdivision applications to create the parcel needed for the school sites?

Response: It is intended to create the lot for the school use via boundary line adjustment from existing lots. Loudoun County Public Schools asks that the Special Exception be conditioned to require creation of the lot prior to issuance of a Zoning Permit. (Please reference #1 above) The traffic analysis prepared for the proposed use finds that existing Lenah Road would be adequate to serve the middle school use. Nonetheless, it is intended to have the new Lenah Connector

Road constructed to the school site prior to the opening of the middle school. Construction plans and profiles for the road are currently under review. The middle school is planned to open in 2010 and the high school a year later in 2011. The owner of the property will create the lot for the proposed use as a part of the conditions of sale.

Comment: 3. Please demonstrate how public utilities will be provided to the school site in the event SBPL-2008-0002 is not approved. Public water and sewer is proposed to be provided to the school site from the Lenah Subdivision. In the event the Subdivision is not approved, how will the schools obtain public utilities?

Response: The contractual agreement for the purchase of the property includes provisions for the extension of utilities and the construction of the Lenah Connector Road. More specifically, the contract includes provisions for escrowed funds that will not be released until the improvements have been completed and would allow for LCPS to undertake the improvements if necessary. The construction plans to extend utilities to this area and specifically to this property are underway.

Comment: 4. Please provide the Special Exception Number on Sheet 1 of the Plan Set (SPEX-2008-0017 and CMPT-2008-0007).

Response: The recommended change has been incorporated into the plan set.

Comment: 5. Please provide the Subdivision Application Number (SBPL-2008-0002) in Note #2 on Sheet 1.

Response: The recommended change has been incorporated into the plan set.

Comment: 6. Please provide a note on Sheet 1 that states there are 1.90 acres of minor floodplain in the Special Exception Area, and the site is subject to Section 4-1500 of the Revised 1993 Zoning Ordinance, Floodplain Overlay District.

Response: The recommended change has been incorporated into the plan set. Please note that the area of minor flood plain within the SPEX area is .14 acres. (Reference Note 3 on the SPEX plat)

Comment: 7. A Floodplain Alteration permit is required for the portion of the future Lenah Connector Road that crosses the floodplain along the northern portion of the Special Exception area.

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Response: Acknowledged. Floodplain alteration applications are currently in preparation and are to be filed by early June.

Comment: 8. Please provide a note on Sheet 1 that states that the entire Special Exception Area is located within the LDN 60 and LDN 60 1 Mile Buffer areas, and is subject to Section 4-1400 of the Revised 1993 Zoning Ordinance, Airport Impact Overlay District. 244.66 acres of the subject parcel are within the LDN 60 1 mile Buffer Area. 19.24 acres of the subject property are located within the LDN 60 Noise Contour.

Response: The recommended change has been incorporated into the plan set. Note: the Special Exception area consists of a total of approximately 99 acres.

Comment: 9. Please Correct Note #6 on Sheet 1. The subject parcel is subject to Section 5-1508, Steep Slope Standards, of the Revised 1993 Zoning Ordinance. 3.92 acres of the Special Exception Area contain moderate steep slopes (15-25%). 0.09 acres of the Special Exception Area contain very steep slopes (25% or greater).

Response: The recommended change has been incorporated into the plan set. Please note that the moderately steep slope area within the SPEX area is 3.83 acres and the area within very steep slopes is 0.1 acre.

Comment: 10. Development is prohibited in very steep slope areas. To development in moderate steep slope areas, the Applicant must obtain a locational clearance from the Department of Building & Development, a grading permit in accord with land disturbing activities on slopes, and incorporate stormwater management Best Management Practices into their plans for the property.

Response: Acknowledged. No development is proposed in areas of very steep slopes. There is limited disturbance in the moderately steep slope area and this will be addressed during the grading permit review. BMP's will be incorporated in to the plans for the Property.

Comment: 11. Please depict all very steep slope areas on the Special Exception Plat. Please verify that the proposed facilities and roads associated with the development of the School Site does not traverse very steep slope areas.

Response: The recommended change has been incorporated into the plan set. No development is proposed in the very steep slope area which is situated to the north of existing Lenah Road.

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Comment: 12. Please be advised that the school site cannot be used to count towards the 50% open space requirement for the Lenah Subdivision. The 50% open space requirement in the TR-1 district must be provided as part of the subdivision area south of the proposed school site.

Response: Acknowledged. SBPL 2008-0002 provides Zoning Requirement Tabulations and Open Space Tabulation on Sheet 2 of 36. The proposed school site is not included in the open space for the residential subdivision. The proposed SPEX and site plan for the school site will meet the open space requirement for the school lot.

Comment: 13. Please eliminate Note #14 on Sheet 1. Signs for County facilities are exempt from the requirements of Section 5-1200 of the Zoning Ordinance.

Response: The recommended change has been incorporated into the plan set.

Comment: 14. Staff recommends the Applicant examine opportunities for shared parking between the Middle and High School uses on the property.

Response: For major school events it is anticipated that these schools will share parking facilities.

Comment: 15. Staff recommends that since the site is heavily wooded, the Applicant preserve existing trees on the Site and set up Tree Save Areas wherever possible that meet the landscaping and buffering requirements found in Section 5-1400 of the Revised 1993 Zoning Ordinance.

Response: Potential tree save areas have been identified on the SPEX plat.

Comment: 16. Please indicate the proposed road classification for the future Lenah Connector to be developed by others. The eventual road classification for the future Lenah Connector will determine the required setback off of this road according to Section 5-900 of the Revised 1993 Zoning Ordinance. If the road has a required setback according to Section 5-900, then the setback needs to be shown on the Special Exception Plat.

Response: The adopted Countywide Transportation Plan designates the future Lenah Connector Road as a minor collector. Section 5-900 requires the setback of the District for the TR-1 Residential District.

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Comment: 17. Please list the Bus Storage Facility as a separate use on the Special Exception Application. A Bus Storage Facility is not an accessory use to a Middle or High School, and therefore, needs to be treated as a separate use. All uses for governmental purposes not listed in the TR-1 District require a Special Exception. Therefore, by listing the Bus Storage Facility as a separate use on the Special Exception Application for the Schools, the requirement to allow the use is being met.

Response: LCPS respectfully asks that staff reexamine the bus storage area as an accessory use. The buses to be parked in this area are the buses that will be serving the proposed middle and high school. These buses will be in good operating condition. This is not a repair facility, only a location to park the buses during the school day and when the buses are not in use. The definition for school includes the language that provides "*Parking of school buses on-site shall be considered an accessory use to a school*". Also, in the Zoning referral for SPEX 2006-0044 (LCPS Grubb property), dated February 27, 2007, page 3, item 10, it is stated that "The outdoor storage of vehicles is permitted if accessory to the . . . school uses on the property".

Comment: 18. Please provide an 8' trail along Lenah Road from the eastern entrance to the Middle School to the intersection of Lenah Road and the future Lenah Connector.

Response: An 8 foot trail will be provided along Lenah Road and has been depicted on the SPEX plat.

Department of Fire, Rescue and Emergency Management
Comments dated May 12, 2008

Comment 1. The Fire and Rescue Planning Staff is not opposed to the application as proposed.

Response: No response necessary.

Office of Transportation Services
Comments dated May 15, 2008

Comment: 1. While a roundabout was considered by VDOT at the Route 50/Lenah Road intersection, funding has not been approved. Therefore, in order to facilitate safe travel on Route 50 and accommodate the anticipated site traffic turning onto Lenah Road from Route 50, intersection

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improvements are necessary. These could take the form of the roundabout or new left and right turn lanes. A traffic signal is shown to be needed. Currently, no funds are available for the design and installation of this signal.

Response: Loudoun County Public Schools would like to review the Route 50/Lenah Road intersection improvements and the funding thereof with the Office of Transportation.

Comment 2. At the present time, the proposed site is served by the unpaved Lenah Road south to Braddock Road. The traffic study notes that a majority of the over 4,900 daily vehicle trips will access the site to and from the south via Braddock Road. The applicant's traffic study also notes that Greenvest LLC is to provide a portion of the Lenah Loop Road between Braddock Road and the site as a two lane undivided road. The SBPL 2008-0002, Lenah, does show a new road, Lenah Village Drive, running along the planned Lenah Loop Road alignment and serving the schools. If this road segment is not in place, the applicant will need to provide this paved connection or investigate paving existing Lenah Road to the south.

Response: The contractual agreement for the purchase of the property includes provisions for the construction of the Lenah Connector Road to the school site.

Comment 3. In order to facilitate the construction of the planned Lenah Loop Road along the eastern boundary of the site, the applicant needs to dedicate 35 feet of right of way along the full eastern property edge plus provide all necessary construction related easements including drainage, utility and grading easements. Additional right of way also needs to be dedicated to accommodate separate right and left turn lanes at the planned Lenah Loop Road/Tall Cedars Parkway intersection.

Response: Right-of-way dedications and easements will be provided as needed for road construction. LCPS is working with the property owner for the construction of the Lenah Connector Road that will provide access to the proposed school site. The CPAP for the Connector Road already includes the 70 foot of right of way for this planned roadway.

Comment 4. In the event the applicants for the Lenah subdivision 2008-0002 do not construct the Lenah Loop Road, the applicant needs to provide construction of two paved lanes of the Lenah Loop Road along the frontage of their site which would include the realignment of the existing east-west portion of Lenah Road into the Lenah Loop Road. This also includes turn

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lanes at the proposed site entrance at future Tall Cedars Parkway. If the two lane on-site and off-site construction of the Lenah Connector is constructed by others south to Braddock Road, then the applicant should provide the other two lanes along their site frontage and two lanes north to Route 50.

Response: As noted above, the purchase of this site includes the construction of the Lenah Loop Road along the frontage of the proposed school site, including the realignment of the existing east west portion to create a T-intersection with the Connector Road. Two lanes of the Lenah Loop Road will be provided. The additional two lanes for a four lane section between Tall Cedars Parkway and Route 50 would appropriately be provided when the properties on the eastern frontage are re-developed.

Comment 5. If not provided under SBPL 2008-0002, the applicant needs to provide two paved lanes along the full frontage of existing Lenah Road plus all VDOT required turn lanes at the proposed site entrances.

Response: The site plan for the proposed school use will include frontage improvements along existing Lenah Road plus any required turn lanes at the proposed site entrances. Loudoun County Public Schools would like to discuss the extent and phasing of the frontage improvements along Lenah Road given the location of the existing pond.

Comment 6. The applicant needs to provide pedestrian/bike trail facilities parallel to existing Lenah Road and the Lenah Loop Road along the site frontage.

Response: An 8 foot wide trail will be provided along existing Lenah Road. The Lenah Loop Road is being constructed by the owner of the property.

Comment 7. The number of parking spaces shown on the concept plan seems high. What are the Ordinance parking requirements for the two schools combined? Please clarify. OTS defers to the Department of Building & Development of Building & Development on this possible issue.

Response: The parking areas depicted on the SPEX plat are consistent with other middle and high school locations and the number which experience has shown is needed. The Zoning Ordinance standards for school use are inadequate requiring 1 space per classroom plus .2 per student over driving age. The 1350 student middle school will have approximately 68 classrooms and the 1800 student high school will have approximately 88 classrooms. There are approximately 140 middle school and 200 high school staff members. There is also a need for

parking to accommodate visitors to the school. The proposed number of spaces for the middle school is approximately 165 and the proposed number of spaces for the high school is approximately 820. Events such as back to school nights, sporting competitions, award ceremonies, school plays, concerts and choral events, and similar activities warrant the provision of adequate parking. Older schools that were constructed with less parking have resulted in overflow to surrounding residential neighborhoods, which have caused conflicts in the past.

Conclusion/Recommendation

The following transportation improvements are needed to serve the schools upon their openings:

- A paved Lenah Road to the schools entrances and a paved Lenah Loop Road (Lenah Village Drive). Both improvements are shown as being constructed by Greenvest as part of SBPL 2008-0002. However, guarantees need to be in place to make sure the construction will occur in the appropriate time frame.

- Intersection improvements at Route 50/Lenah Road. This would be either a roundabout, which OTS prefers, or turn lanes and a traffic signal. There is currently no funding for these improvements and the proposed fair share contributions by the applicant are inadequate.

Further discussion is needed with the applicant to work out these issues.

Response: Both a paved Lenah Road and a paved Lenah Loop Road to the school entrances will be in place prior to occupancy. Loudoun County Public Schools would like to discuss the Route 50/Lenah Road improvements with staff.

Community Planning **Comments dated May 21, 2008**

Comment: 1. The proposed middle and high schools are envisioned within the Transition Policy Area along collector roads provided that they are developed at a scale that allows them to blend effectively (visually and spatially) into a rural landscape. Therefore, staff supports the siting of these schools in the proposed location provided that they address the issues outlined below.

Response: Please see responses below.

Comment: 2. Staff recommends that the applicant replace the loss of any wetlands functions in the watershed through the use of compensatory mitigation (restoration, creation, enhancement, and preservation).

Response: In accord with County policy and staff recommendation, both ERT and Community Planning, LCPS will mitigate the loss of any wetlands as follows: 1) within the Board Run Watershed within the same Loudoun County geographic Policy area, 2) within the Broad Run Watershed within another Loudoun County geographic Policy Area, or 3) elsewhere within the Loudoun County, subject to approval by the U.S. Army Corps of Engineers and the Virginia Department of Environmental Quality.

Comment: 3. Due to the potential for surface water contamination from stormwater runoff, staff recommends that the applicant commit to practices that minimize impacts to site resources and incorporate Low Impact Development techniques, such as permeable pavers, porous concrete, rain gardens, wet ponds, and oil-water separators, sited as close as possible to pollution sources.

Response: The applicant has incorporated low impact design techniques such as vegetative filter strips, disconnected impervious areas, and the use of grass swales to channel runoff into the project design. Unfortunately, the soils on the site do not support the use of grid pavers or other permeable surfaces. Stormwater management, BMPs, low impact design as well as a turf management best practices program will be utilized in the site development and ultimate site operations.

Comment 4. Staff recommends that the applicant commit to Tree Conservation Areas, incorporating Cover Types 2 and 7, wherever practicable. Staff also recommends that the applicant preserve fencerows, wherever practicable.

Response: The SPEX Plat designates potential tree save areas. These areas include tree cover to the west of the future Lenah Connector Road, tree cover near the existing pond and tree cover to the west of the proposed stadium. The largest area, which is along the future Lenah Connector Road, is predominately Type 2. LCPS examined the potential to preserve fencerows, however, the geometric and grading constraints of the program requirements did not allow for conservation of a significant enough portion of the hedgerow to maintain the character of a fence row preserved.

Comment: 5. Staff recommends that the applicant commit to BMPs where encroachment into areas of moderately steep slopes occurs.

Response: Best Management Practices will be incorporated in those limited areas where encroachment into moderately steep slopes occurs. These areas will be reviewed and addressed as a part of the grading permit application.

Comment: 6. Staff recommends that the applicant incorporate indigenous vegetation into the landscape design.

Response: LCPS is willing to incorporate indigenous plant materials into the landscaping design.

Comment: 7. Because the school buildings are longer than 150' in length, they do not meet County policies regarding the length of non-residential uses within the Transition Area. Therefore, staff recommends that the applicant avoid the use of continuous plane building surfaces, wherever practicable, and break up large building segments into smaller segments through the use of fenestration and setbacks.

Response: The facility design has been evaluated from an aesthetic perspective and many features have been incorporated in the spirit of the comment. Numerous building corners have been utilized on each elevation as well as fenestration features. As an example; each classroom contains two double hung windows similar to that which is used in residential construction, accent materials (color and texture) are specified in horizontal bands around the facility that minimize the appearance of the building height. Also, a standing seam metal roofed canopy stretches along a large portion of the front of the facility that serves a practical purpose as well as adds to the appeal and minimizes the height.

Comment: 8. Staff recommends that parking surfaces be interspersed with tree plantings and other on-site landscape materials to prevent the creation of large paved surfaces. Staff also recommends that the applicant pay special attention to views and the parking areas from the adjacent residential uses and consider the use of short berms to block the views of the pavement.

Response: The parking areas will be interspersed with landscaping to prevent the creation of large paved surfaces. LCPS has been working with the adjacent Lenah Run homeowners to provide a berm with landscaping along Lenah Road which will block the view of the parking pavement areas along Lenah Road. The proposed tree save area and required Type II buffer enhanced with evergreen plantings will screen the bus parking area proposed to the west of the future Lenah Connector Road. In addition, the required Type II buffer along the western

and southern property boundaries will be enhanced with evergreen plantings to screen the site from the adjacent residential properties. Please note that LCPS continues to work with property owners adjacent to the site.

Comment: 9. Staff finds that the Front and Side Buffers contain an adequate number of plants to help buffer the schools from the surrounding uses. Staff recommends that the plants be placed to frame front views of the schools and to filter views of utility areas, and that these elements be repeated throughout the school campus. Staff also recommends that the applicant utilize plants indigenous to the area after consultation with the County Arborist. Planting areas should not be limited to buffers, but should be designed to flow into the adjacent pervious areas.

Response: As noted above, LCPS has been working with adjacent property owners to address buffering concerns. LCPS is willing to incorporate indigenous plant materials in consultation with the County Arborist and to incorporate landscaping in various areas throughout the site. (Also please Reference Comment 8)

Comment: 10. Staff recommends that the applicant specify the sustainable design measures that will be incorporated into each school and its surrounding site. Staff suggests that the applicant consider committing to the LEED Rating System.

Response: LCPS has engaged a team of architects, engineers and environmental consultants to evaluate the design in accordance with LEED, Green Globes, CHPS and the EPA Energy Star program. Preliminary results of study indicate that the LCPS facilities will fall well within the required score relative to the LEED Rating System. A summary graph of results is attached and final assessment report will be available upon completion in mid June. (Also Reference ERT Comments 1 and 2)

Comment: 11. Staff recommends that the applicant depict the existing and planned pedestrian and bicycle network on the plat with special attention to pedestrian and bicycle facilities along internal roads, the Lenah Connector, and Lenah Road. The applicant should state whether these facilities will be constructed by the applicant or by others. Staff recommends that sidewalks/trails be provided on both sides of all internal roads and that safe crossing facilities be provided at all intersections. Staff also recommends that all bicycle and pedestrian facilities be constructed in accordance with County policies, AASHTO, and ADA. Staff recommends that 5 to 6-foot wide sidewalks be provided on both sides of all internal roads, that the

applicant consider 10-foot paths for areas of high pedestrian traffic, and that safe crossing facilities be provided at all intersections.

Response: A separate pedestrian and bicycle network plan sheet (5) has been added to the SPEX plat to illustrate the proposed network. The facilities shown on the plan are to be constructed by LCPS with the exception of the sidewalk to be constructed as a part of the Lenah Connector Road which will be built by the property owner. The sidewalk on the eastern side of the internal drive has been extended to provide a full sidewalk on the east side complementing the full trail to be provided on the west side. Intersection crossings are also illustrated.

Comment: 12. Staff recommends that the applicant commit to lighting that is downward directed, is fully shielded, provides a glare free environment, is confined to the site, and has illumination levels that are no greater than necessary for a light's intended purpose. All lighting should be designed to preclude light trespass onto adjoining properties, glare to passersby, skyglow, and deterioration of the nighttime environment. Staff recommends that these standards also apply to lighting for all athletic facilities, including the football stadium.

Response: The proposed lighting will be cutoff and shielded, directed downward and toward the interior of the property. The lighting system incorporates a reflector technology system that directs light onto the field and minimizes glare and spillage. Development of the property will comply with the Zoning Ordinance lighting standards. The majority of the athletic events are over by 9:30 P.M. Typically parking lot lighting will be turned off within one hour following the end of the evening activity or by 11 P.M., whichever occurs first. Similarly, athletic field lighting will be turned off by 11 P.M.

Comment: 13. The proposed middle and high schools are identified in the FY-2008-2012 School Board Adopted Capital Improvements Program. Additionally, staff finds that the general location, character, and extent of the proposed uses are in substantial accord with the Comprehensive Plan. Therefore, staff supports the approval of a Commission Permit for the proposed uses.

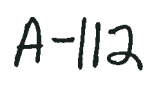
Response: No response necessary.

Note: VDOT Comments. A separate response will be provided to the VDOT Comments received on May 28th. A meeting with the County Office of Transportation and VDOT has been scheduled to review the transportation comments.

A-III

Improvements:

- ✓ Stormwater management
- ✓ EnergyStar roof
- ✓ Water use reduction
- ✓ Energy efficiency
- ✓ Construction waste mgmt
- ✓ Recycled content materials
- ✓ Local materials
- ✓ Construction IAQ mgmt
- ✓ Low emitting materials



Below is the four year history of the cost avoidance at Catoctin ES.

fy2004		fy2005		fy2006		fy2007	
Electricity	24.88%	Electricity	25.64%	Electricity	23.20%	Electricity	26.61%
Natural Gas	67.71%	Natural Gas	40.44%	Natural Gas	73.26%	Natural Gas	72.97%
Water	(13.55%)	Water	4.26%	Water	17.77%	Water	14.19%
Totals:	24.77%	Totals:	25.56%	Totals:	25.92%	Totals:	28.88%

In FY07 Catoctin ES reached its highest cost avoidance level yet with 28.88%.

**Catoctin ES has continued to improve in cost avoidance each of the last 3 years.
IF WE WERE GOING TO GIVE AN AWARD IT WOULD BE GIVEN TO
SCHOOLS WITH 3 CONSECUTIVE YEARS OF IMPROVEMENT.**

WELL DONE!!!

Catoctin ES is 3.88% points above the county average of 25%.

I propose the goal for FY08 is to once again continue to make small gains in cost avoidance. If possible, it would be great to break the 30% mark.

Good Luck!

Your Friend,

John Lord
LCPS Energy Education Specialist

PS – Below are some of the most effective unobtrusive methods to conserve energy.

1. Turn off light in empty areas.
(Hallways after students go home, empty classrooms, gyms, libraries, & cafeterias)
2. Follow the computer use policy.
(Every computer in the building should be turned off over a weekend – except servers)
3. Report all water leaks to Facilities Services
(Follow up to make sure the work has been completed and the leak is eliminated)
4. Keep doors and windows closed.
(Use an attendant to open doors at arrival and departure, rather than propping doors open)
5. Ensure that all exterior lights are off during daylight hours. Report any lights left on.
(Parking lot pole lights, wall lights on the side of the school, lights under awnings)

A-113

Loudoun County VA

Energy CAP

Cost Avoidance Program

Energy Report Card - Building

Sorted by Building, Energy Type

Energy Type	Use	Units	Cost Without CAP	Actual Cost	Cost Avoidance \$	Cost Avoidance %
Building: 03-CATOCTIN ES - CATOCTIN ES						
Electricity	1,104,480	KWH	\$103,311.66	\$75,816.77	\$27,494.89	26.61%
Natural Gas	1,120	THERM	\$6,895.20	\$1,863.79	\$5,031.41	72.97%
Water	584	KGAL	\$4,729.93	\$4,058.88	\$671.05	14.19%
Totals:	3,881,620	KBTU	\$114,936.78	\$81,739.44	\$33,197.34	28.88%

Filters: Site Name Equal To CATOCTIN ES; Billing Periods In Range From 200607 To 200706